



**U S Army Corps
of Engineers**
Huntington District

Public Notice

In reply refer to Public Notice No.
2008-00582-ERI

Issuance Date: **DEC 29 2008**

Stream:
Wards Canal

Closing Date: **FEB 27 2009**

Please address all comments and inquiries to:

U.S. Army Corps of Engineers, Huntington District, Ohio Transportation Office

ATTN: CELRH-OR-FN-OT Public Notice No. (reference above)

3990 East Broad Street

Building 10, Section 10

Columbus, Ohio 43218-3990

Phone: (614) 692-4654

PUBLIC NOTICE: The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

REGULATORY PROGRAM: Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

SECTION 10: The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

SECTION 404: The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

TO WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act. This notice serves as the Corps of Engineers' request to the Ohio Environmental Protection Agency (OEPA) to act on Section 401 Water Quality Certification for the following application:

APPLICANT: Ohio Department of Transportation
1980 West Broad Street
Columbus, Ohio 43223

LOCATION: The proposed project is located in Wards Canal along State Route (SR) 2 in Jerusalem Township, Lucas County, Ohio. The proposed project would begin approximately 314 feet west of Elliston Road and proceed in an easterly direction along SR 2 for a distance of approximately 3,850 feet.

DESCRIPTION OF THE PROPOSED WORK: The applicant proposes to place fill material in waters of the United States in order to reconstruct SR 2 and the Howard Road intersection in Jerusalem Township, Lucas County, Ohio. Reconstruction activities would include the addition of turn lanes, improvement of intersection radii and driveway approaches, construction of drainage swales, storm water catch basins and storm sewer outfall structures. In addition, the project would involve stabilization of the south side of Wards Canal in order to protect the proposed roadway improvements.

Work associated with the proposed project would involve the permanent placement of approximately 2,460 cubic yards of fill material along 2,704 linear feet (0.98 acre) of the south side of Wards Canal. The majority of the total fill material (2,451 cubic yards) would be used to stabilize the bank adjacent to the proposed roadway improvements mentioned above. The balance of the fill material (9 cubic yards) would be used to construct new concrete storm sewer outfall structures. Plans of the proposal are attached to this notice.

MITIGATION PLAN: The applicant has submitted a conceptual mitigation plan to compensate for unavoidable impacts. The proposed mitigation plan involves utilizing 4,056 linear feet (a 1.5:1 mitigation to impact ratio) of stream mitigation credit at the St. John's Dam Removal site located on the Sandusky River in Seneca County, Ohio.

WATER QUALITY CERTIFICATION: A section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain the certification from the Ohio Environmental Protection Agency.

HISTORIC AND CULTURAL RESOURCES: The Federal Highway Administration (FHWA) is the lead Federal agency for this project. As such, FHWA is responsible for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. The applicant provided documentation of an extensive cultural resource study previously conducted along SR 2 from Oregon, Ohio to Camp Perry in Ottawa County, Ohio. Based on this study ODOT has determined that the proposed project would have no potential to affect any historic property. A copy of this public notice will be sent to the Ohio Historic Preservation Office for their review. Comments concerning archeological sensitivity of a project area should be based upon collected data.

ENDANGERED/THREATENED SPECIES REVIEW: The project is located within the known or historic range of the following endangered (E), threatened (T) or candidate (C) species:

Indiana bat (E)
Karner blue butterfly (E)
Piping plover (E)
Eastern prairie fringed orchid (T)
Rayed bean (C)
Eastern massasauga (C)

As noted above, FHWA is the lead Federal agency for this project. FHWA is responsible for compliance with the NEPA and Section 7 of the Endangered Species Act. The U.S. Fish and Wildlife Service (USFWS), in a letter to the applicant dated March 20, 2008, agreed with the applicant's determination that the proposed project would have no effect on the species listed above. This public notice serves as a request to the USFWS for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST REVIEW AND COMMENT: Any person who has an interest that may be adversely affected by the issuance of a permit may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity. This application will be reviewed in accordance with 33 CFR 320-332, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b) (1) of the CWA. Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof; of those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

SOLICITATION OF COMMENTS: The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. For accuracy and completeness of the administrative record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

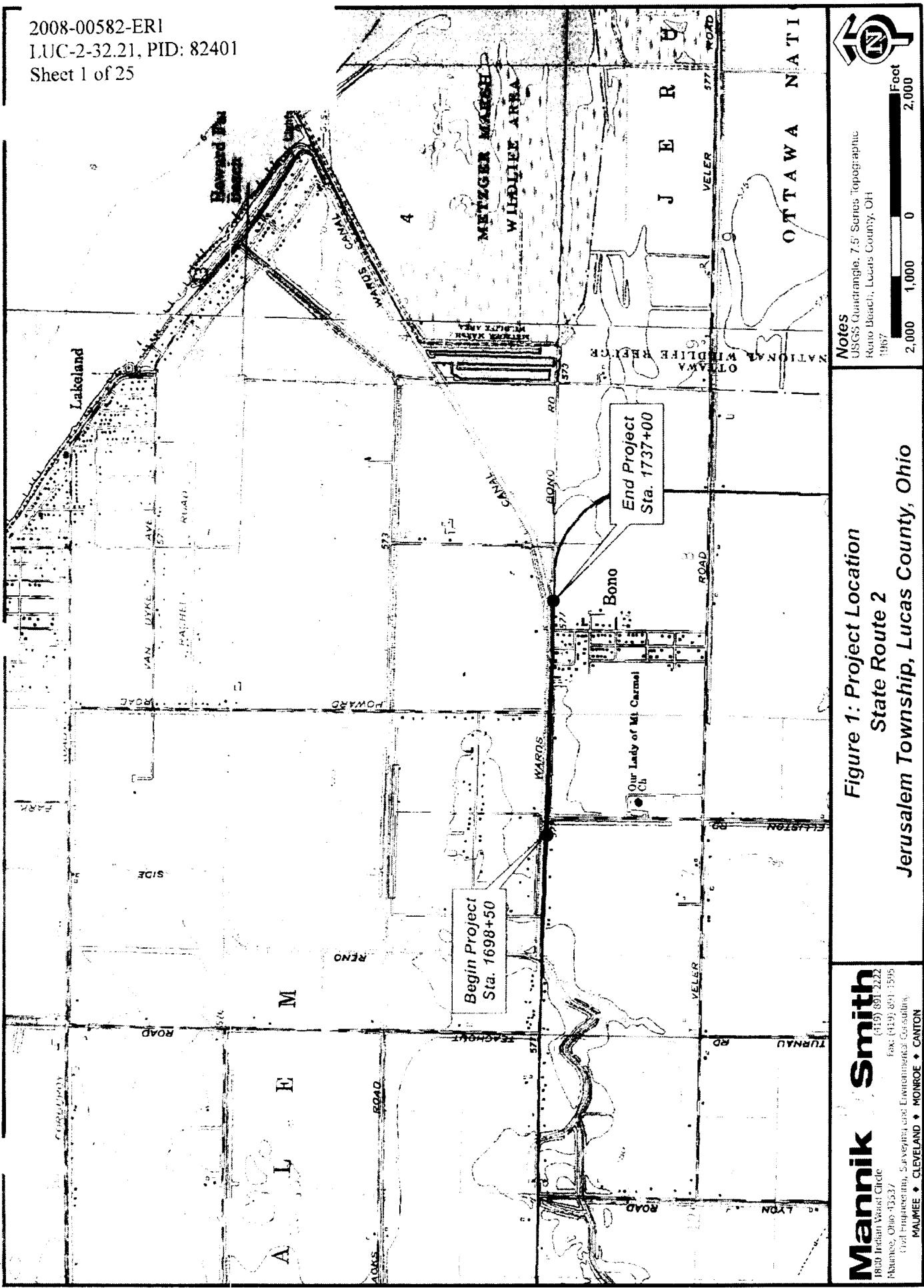
CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to:

West Virginia/Transportation Section – Ohio Regulatory Transportation Office
U.S. Army Corps of Engineers Huntington District
3990 East Broad Street
Building 10, Section 10
Columbus, Ohio 43218-3990

Please note, the names and addresses of those who submit comments in response to this public notice become part of our administrative record and, as such, are available to the public under provisions of the Freedom of Information Act. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, please contact Mr. Peter Clingan of the Ohio Regulatory Transportation Office, at 614-692-4654.

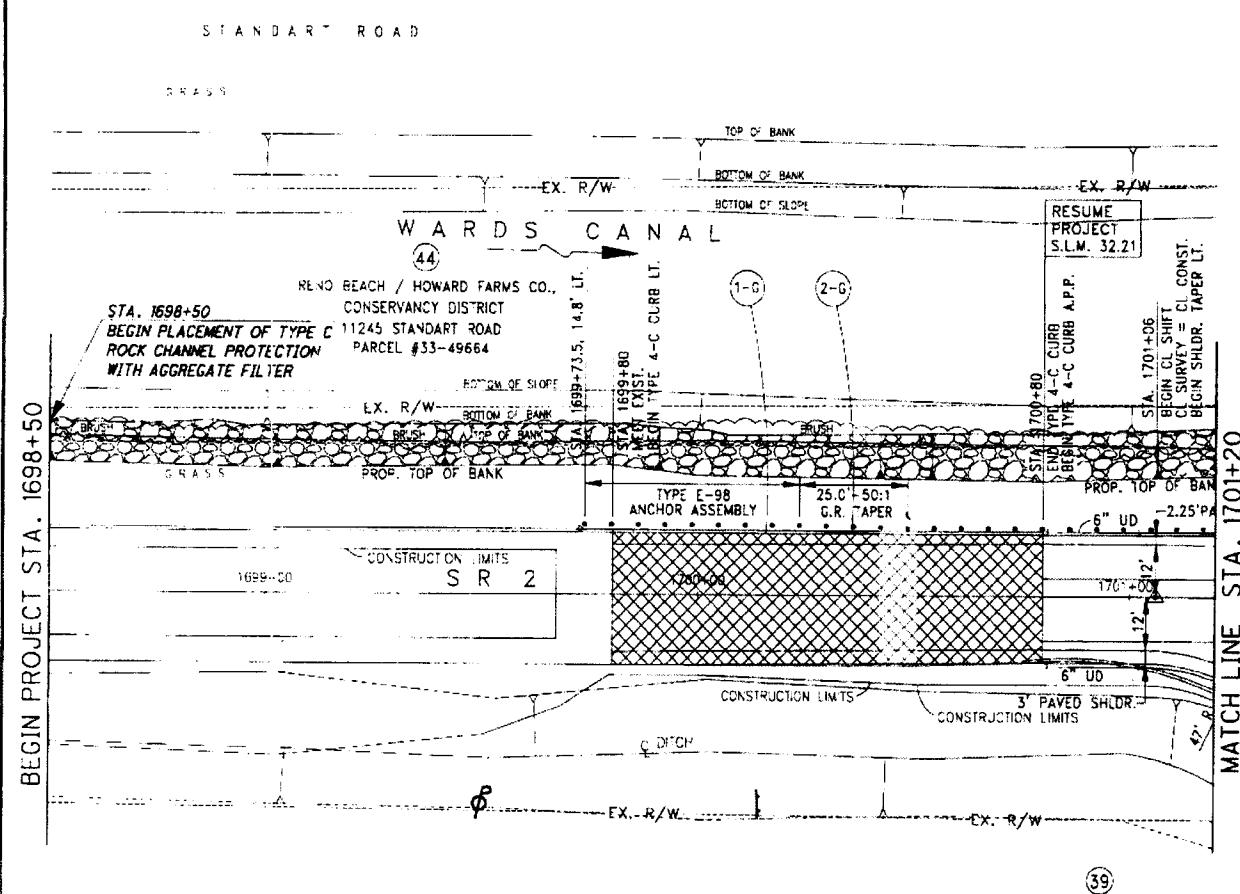
Ginger Mullins
Ginger Mullins
Chief, Regulatory Branch

(O, B)



Mannik Smith
1830 Indian Wave Circle
Plainview, Ohio 45367
(419) 891-2222
Fax: (419) 891-1595
Civil Engineers, Surveyors and Environmental Consultants
MAUMEE • CLEVELAND • MONROE • CANTON

EX. R/W



11/4/2008 11:23:24 AM

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(39) HAROLD C. DRIER
1044 JERUSALEM ROAD
PARCEL #33-50277

PLAN

PLAN SCALE: 1=40'

WARDS CANAL	
	TOTAL IMPACT AREA (10.00 AC)
AREA EXCAVATED OR FILLED WITHIN CONSTRUCTION LIMITS:	0.00 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	0.00 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

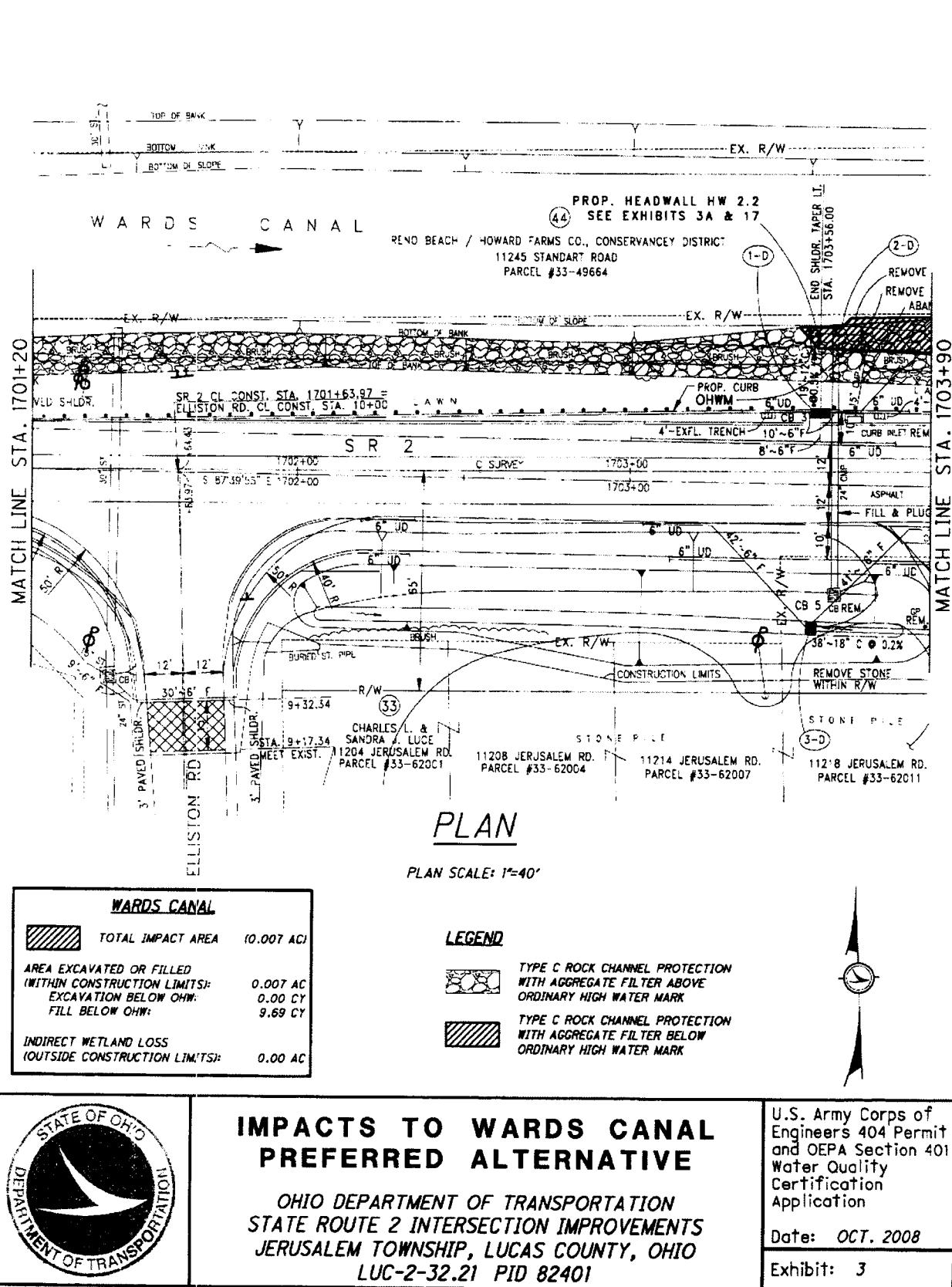
OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

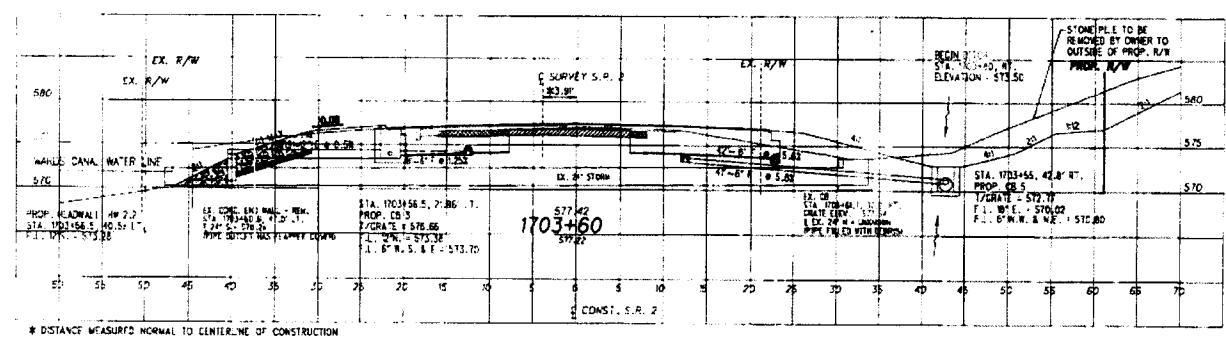
U.S. Army Corps of
Engineers 404 Permit
and OEPA Section 401
Water Quality
Certification
Application

Date: OCT. 2008

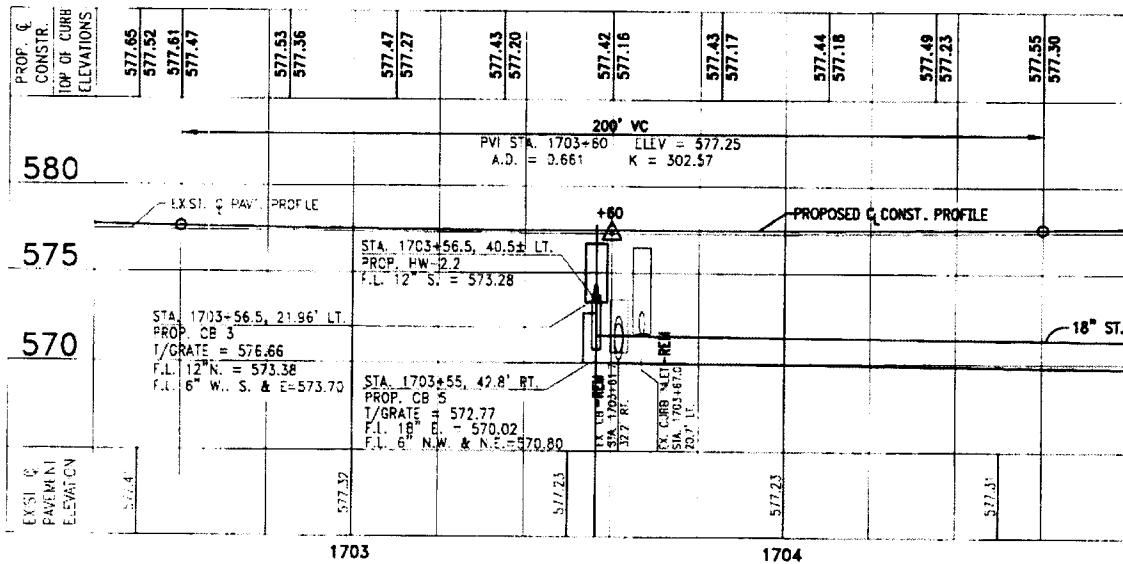
Exhibit: 2

EX. R/W





PROFILE



CROSS SECTION

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APPROXIMATE PROFILE HORIZONTAL SCALE: 1=20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1=40'



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

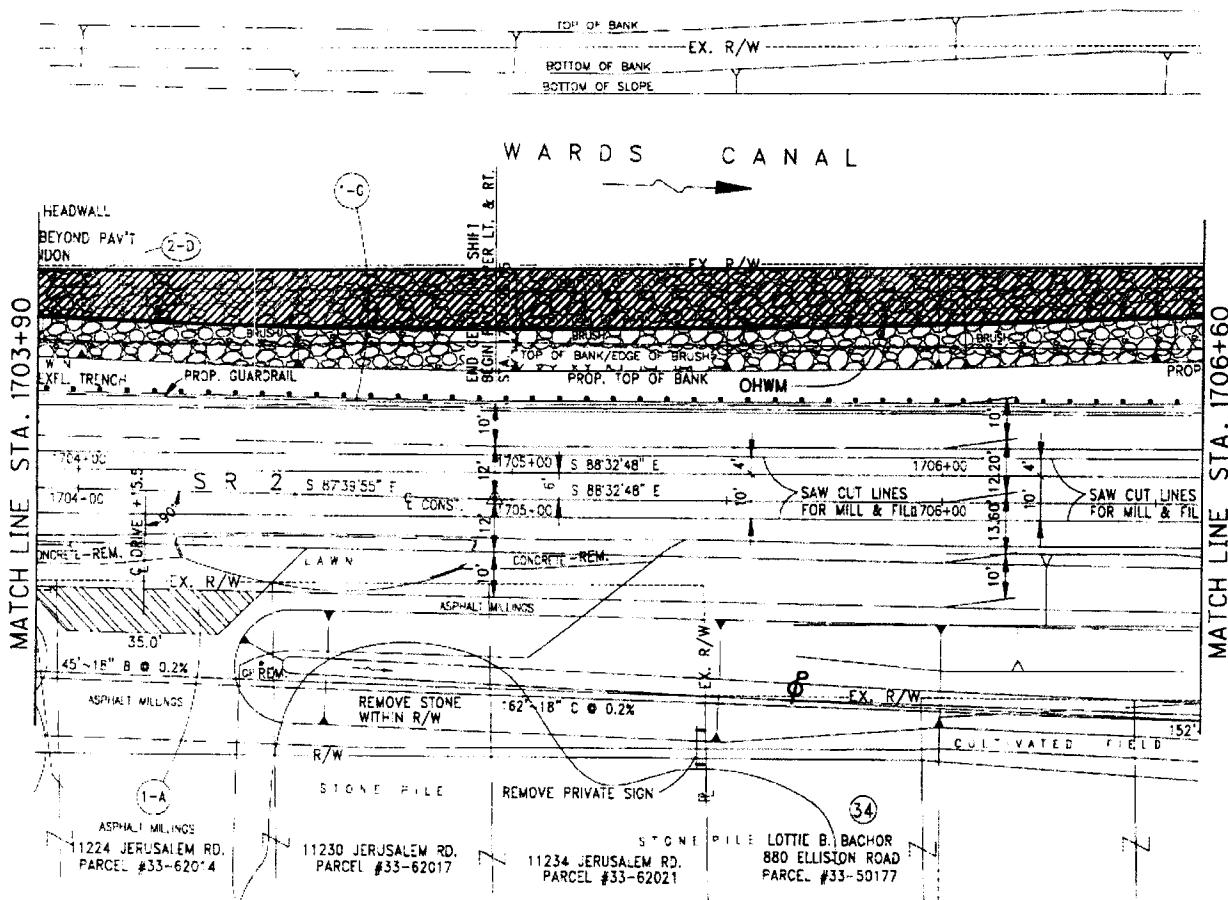
U.S. Army Corps of
Engineers 404 Permit
and OEPA Section 401
Water Quality
Certification
Application

Date: OCT. 2008

Exhibit: 3A

- EX. R/W -

E



PLAN

PLAN SCALE: 1"=40'

<u>WARDS CANAL</u>	
	TOTAL IMPACT AREA (0.079 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.079 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	157.60 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC



**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER ABOVE
ORDINARY HIGH WATER MARK**



**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER BELOW
ORDINARY HIGH WATER MARK**



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

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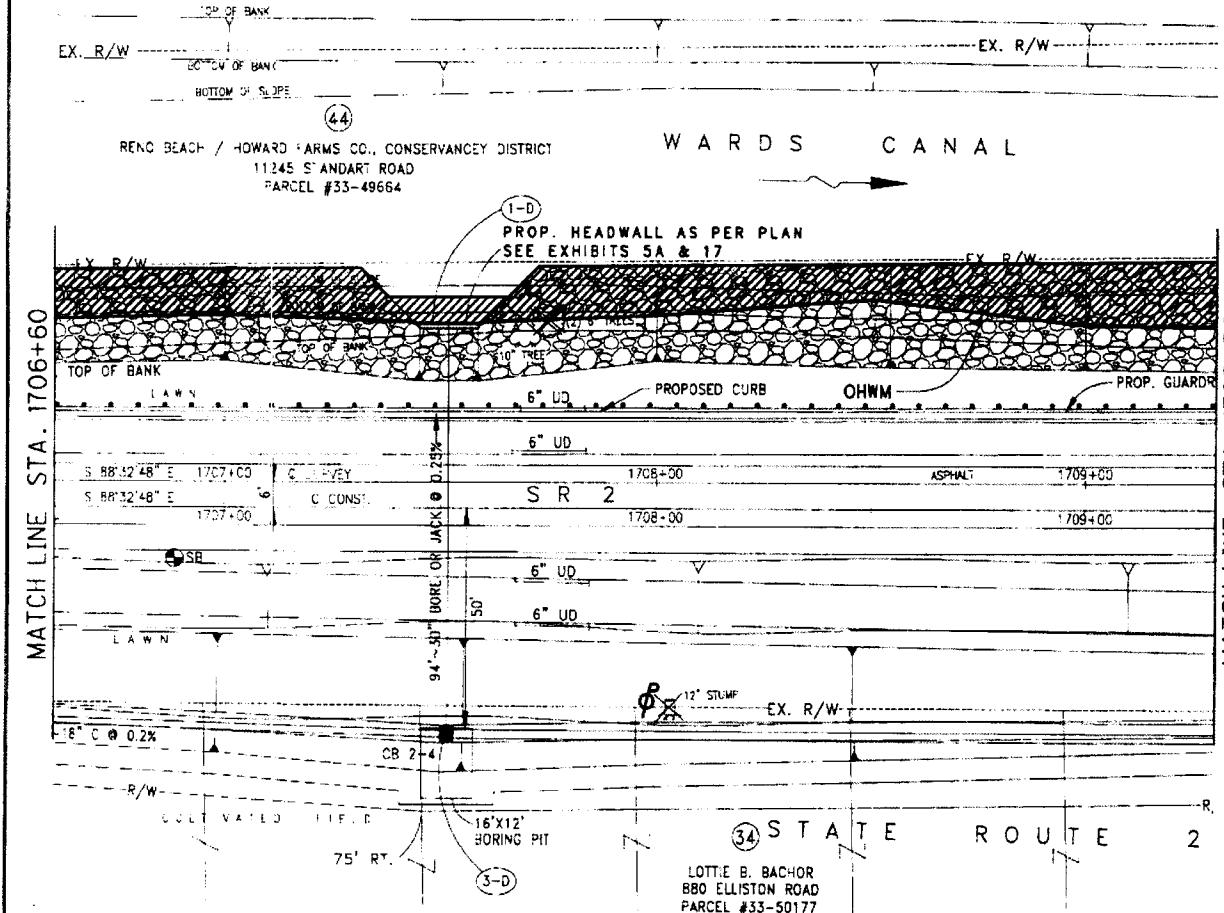
Exhibit: 4

2008-00582-FRI

IUC-2-32.21, PID: 82401

Sheet 6 of 25

EX. R/W



PLAN

PLAN SCALE: 1"-40'

WARDS CANAL	
TOTAL IMPACT AREA	(0.067 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.067 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	143.84 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



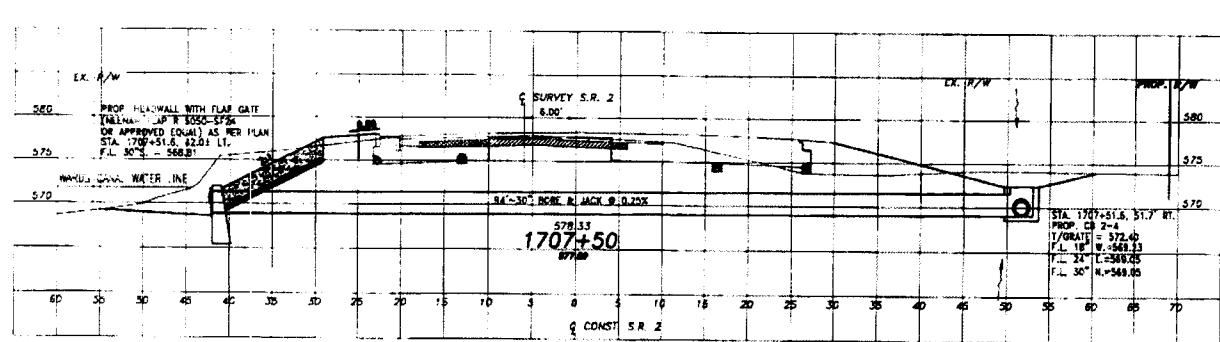
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

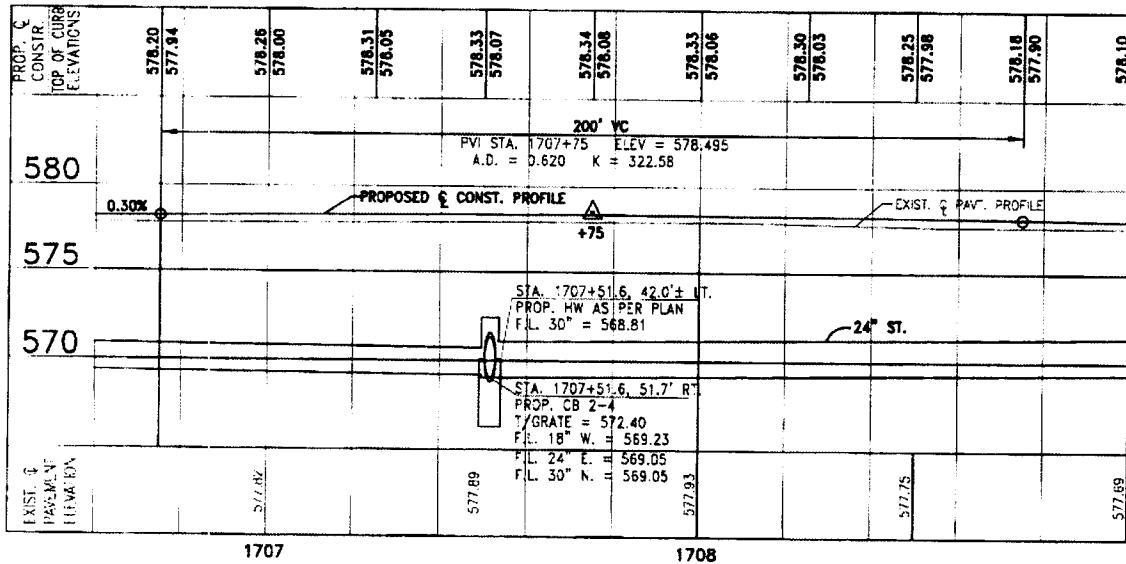
U.S. Army Corps of
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Water Quality
Certification
Application

Date: OCT. 2008

Exhibit: 5



PROFILE

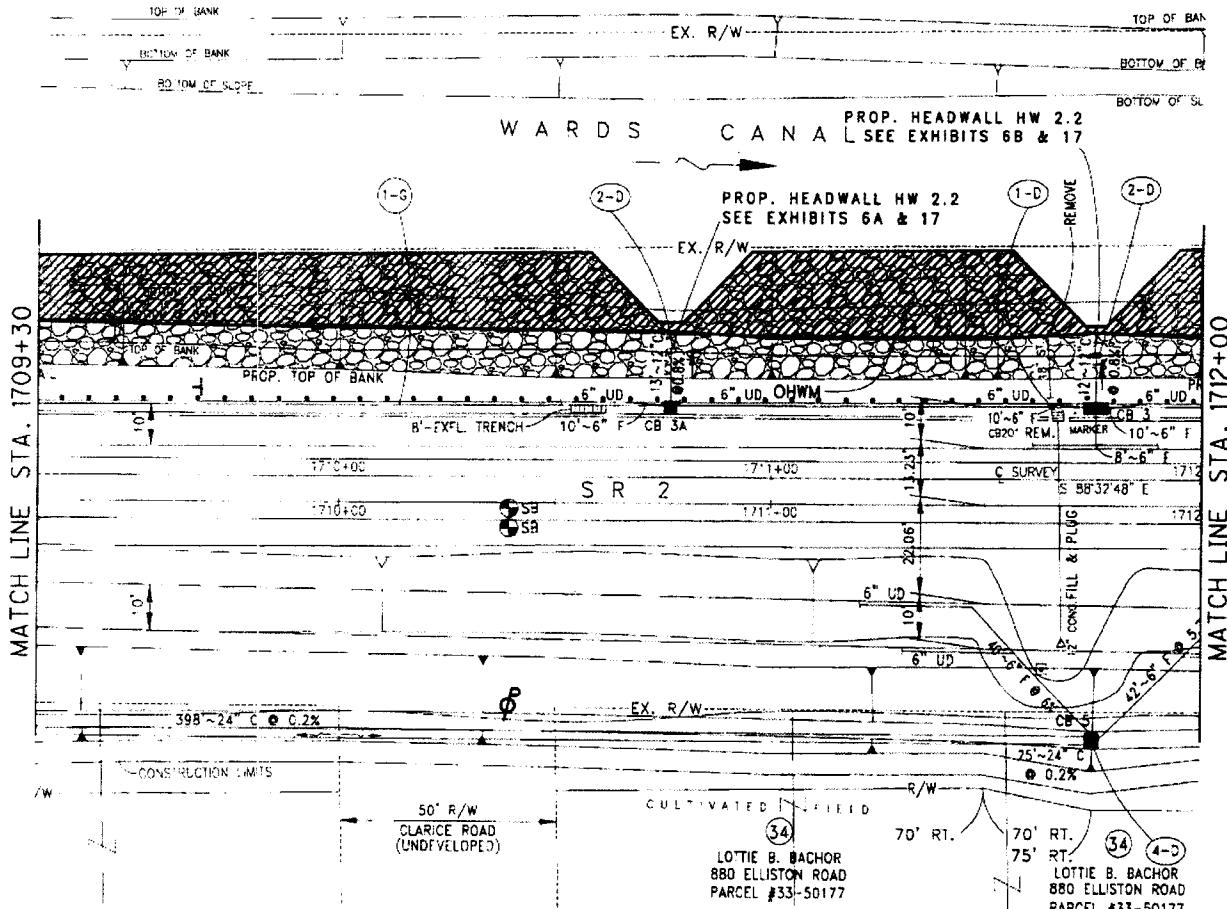


CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1"-20'
 APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1"-40'

	IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE OHIO DEPARTMENT OF TRANSPORTATION STATE ROUTE 2 INTERSECTION IMPROVEMENTS JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO LUC-2-32.21 PID 82401	U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application Date: OCT. 2008 Exhibit: 5A
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-- EX. R/W



PLAN

PLAN SCALE: 1"=40'

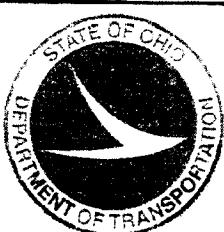
<u>WARDS CANAL</u>	
	TOTAL IMPACT AREA (1.093 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.093 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	207.77 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC



**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER ABOVE
ORDINARY HIGH WATER MARK**



**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER BELOW
ORDINARY HIGH WATER MARK**



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

**U.S. Army Corps of
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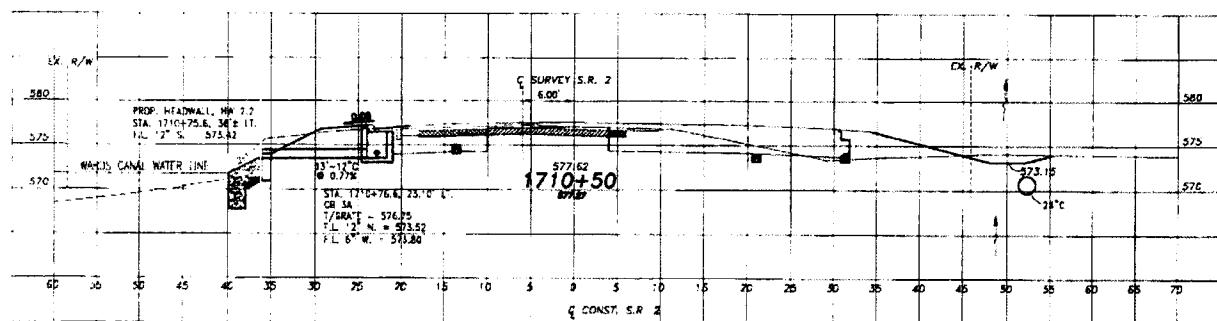
Date: OCT. 2008

Exhibit: 6

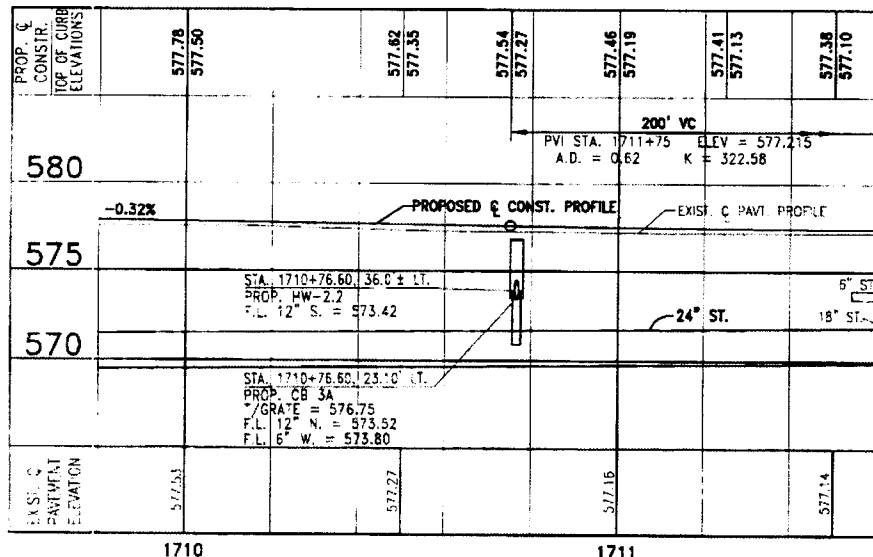
2008-00582-ERI

LUC-2-32.21, PID: 82401

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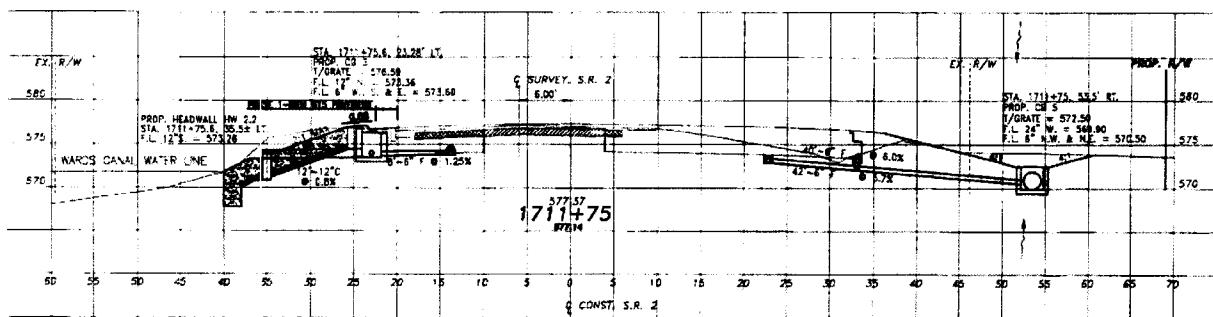
PROFILE



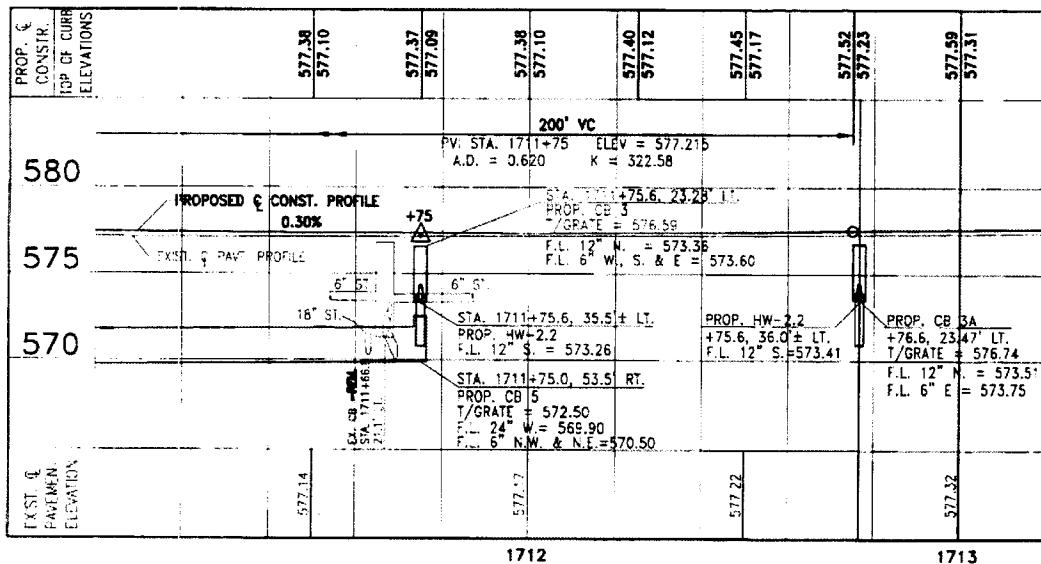
CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1"-20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1"-40'

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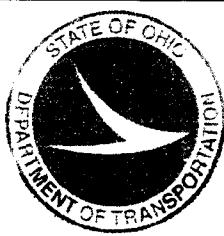


PROFILE



CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1"=20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1"=40'



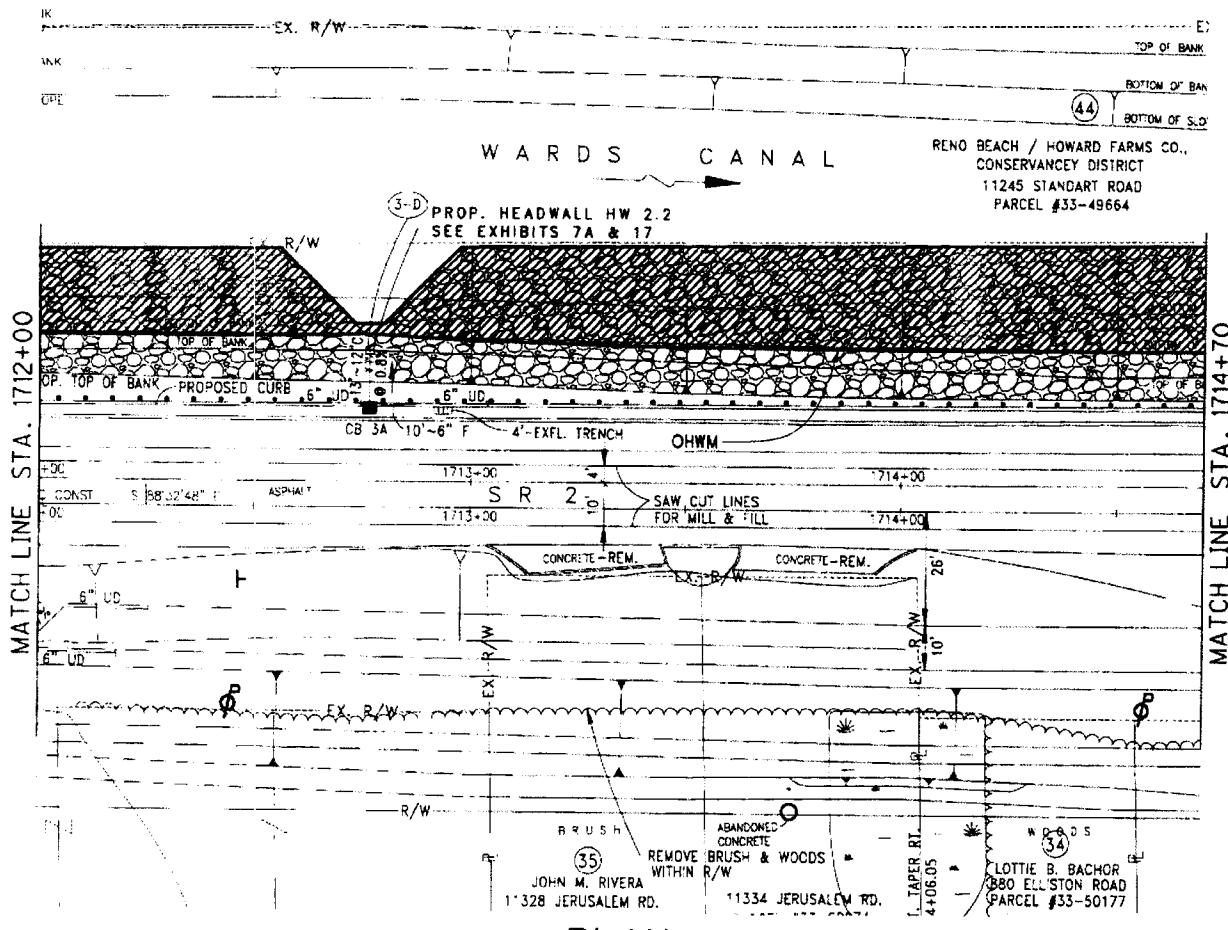
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

U.S. Army Corps of
Engineers 404 Permit
and OEPA Section 401
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Certification
Application

Date: OCT. 2008

Exhibit: 6B



PLAN

PLAN SCALE: 1=40'

<u>WARDS CANAL</u>	
	TOTAL IMPACT AREA (0.126 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS): EXCAVATION BELOW OHW: FILL BELOW OHW:	0.126 AC 0.00 CY 344.60 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

-
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
-
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



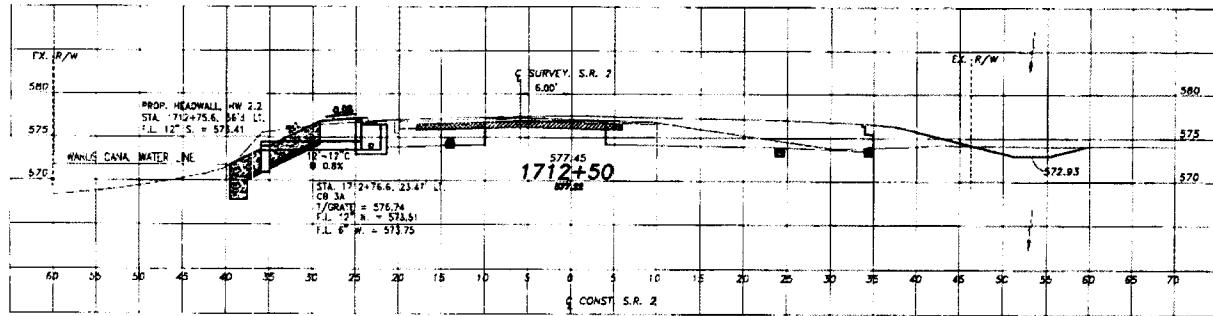
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

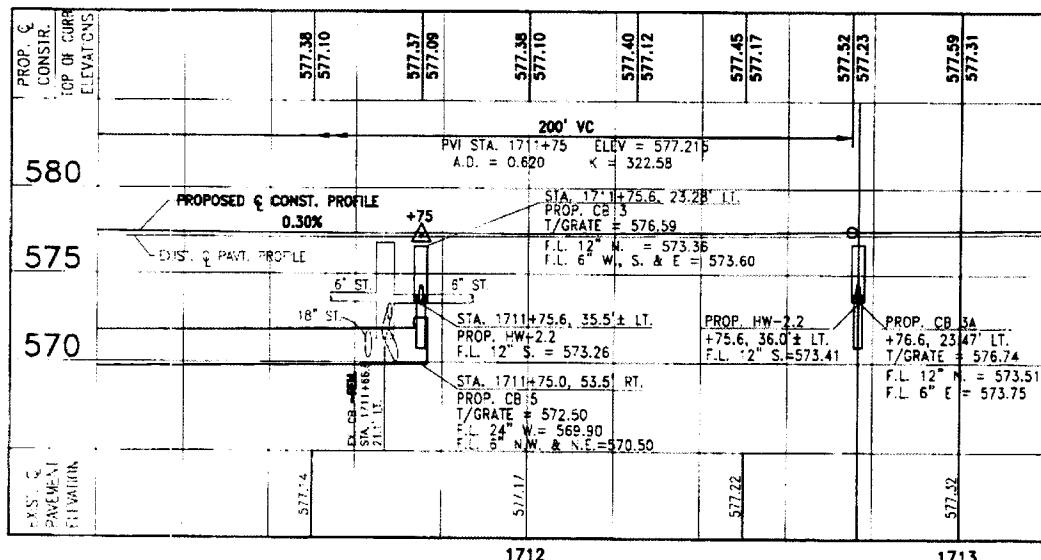
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

Date: OCT. 2008

Exhibit: 7

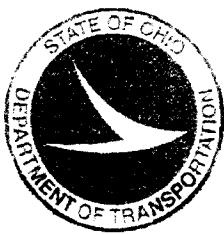


PROFILE



CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1"=20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1"=40'



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

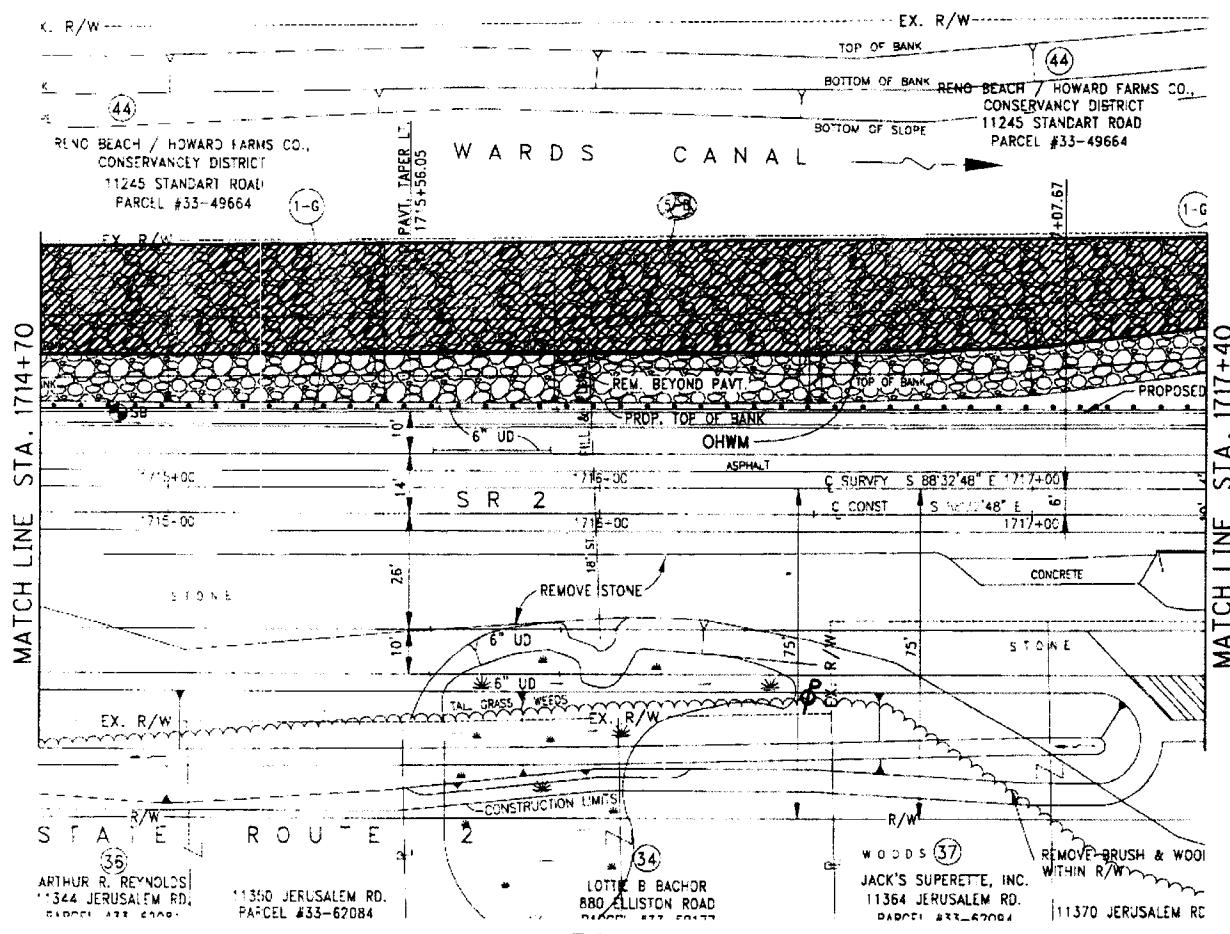
OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

**U.S. Army Corps of
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Water Quality
Certification
Application**

Date: OCT. 2008

Exhibit: 7A

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WARDS CANAL	
	TOTAL IMPACT AREA (0.150 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.150 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	460.00 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



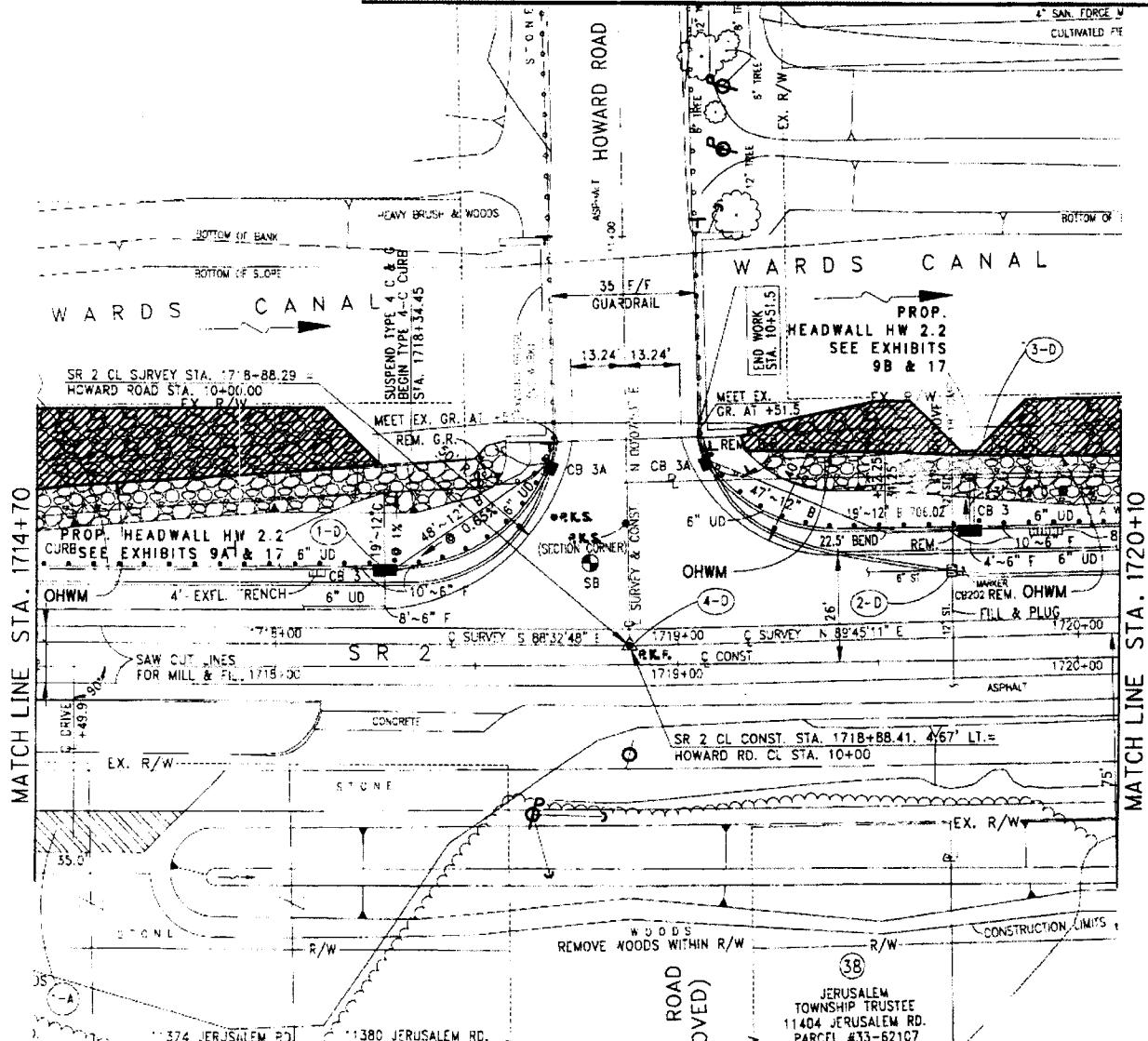
**IMPACTS TO WARDS CANAL
PREFERRED ALTERNATIVE**

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

Date: OCT. 2008

Exhibit: 8



PLAN

PLAN SCALE: 1'=40'

<u>WARDS CANAL</u>	
	TOTAL IMPACT AREA (0.052 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS): EXCAVATION BELOW OHW: FILL BELOW OHW:	0.052 AC 0.00 CY 123.63 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



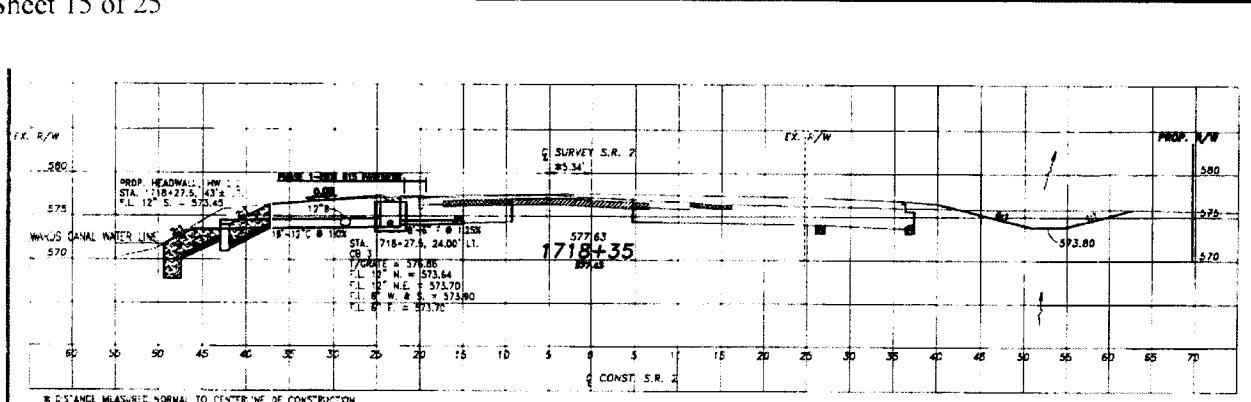
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

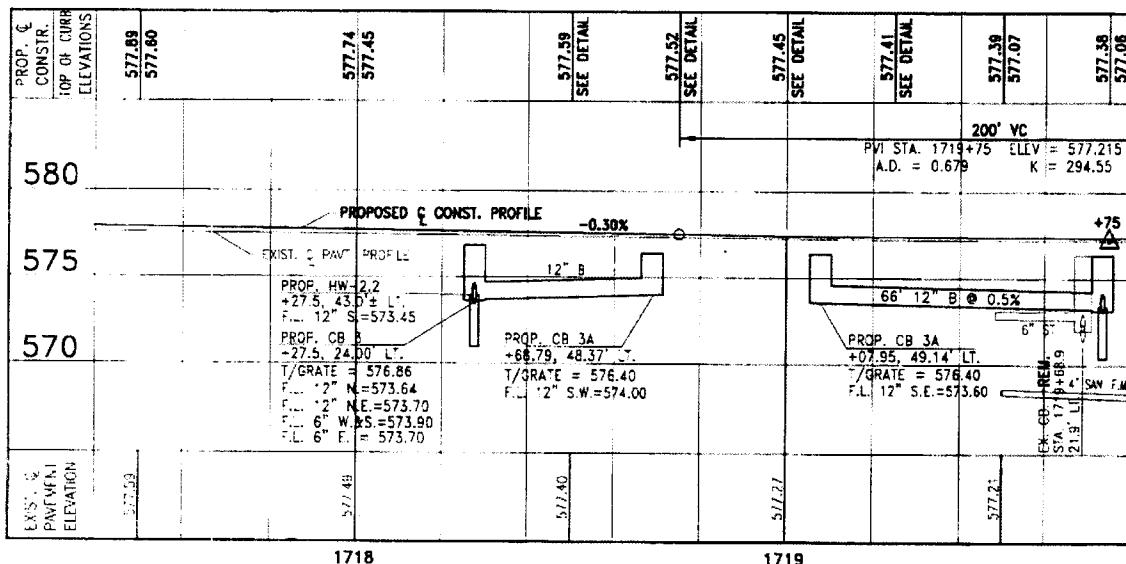
U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application

Date: OCT. 2008

Exhibit: 9



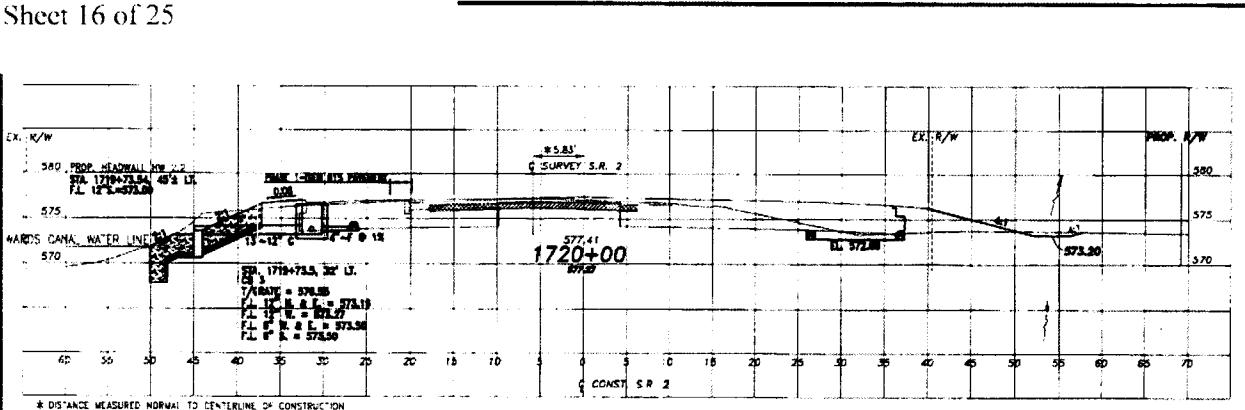
PROFILE



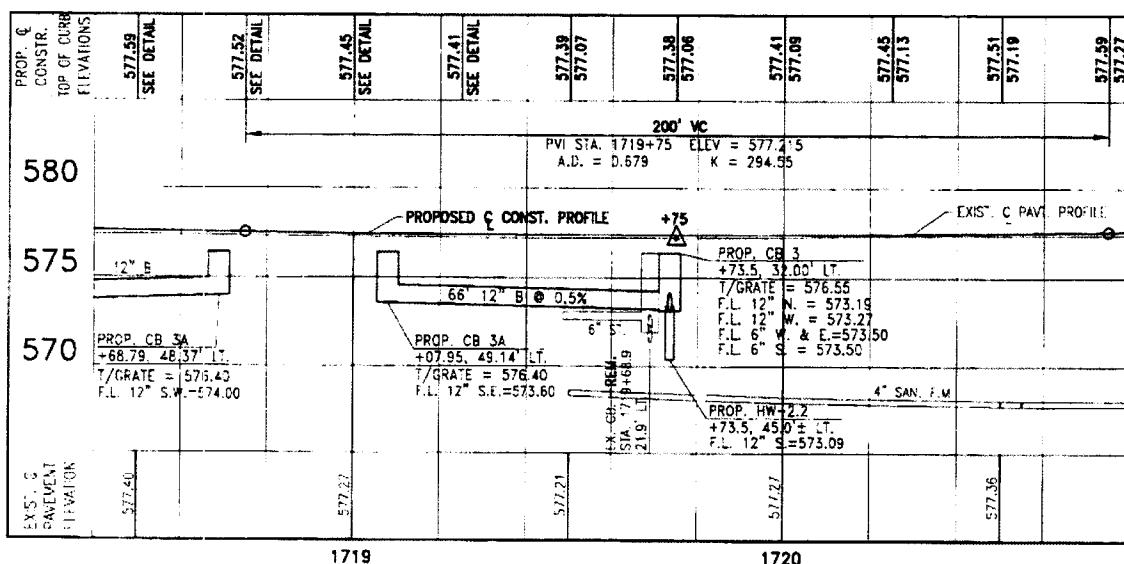
CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1'=20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1'=40'

	IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE OHIO DEPARTMENT OF TRANSPORTATION STATE ROUTE 2 INTERSECTION IMPROVEMENTS JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO LUC-2-32.21 PID 82401	U.S. Army Corps of Engineers 404 Permit and OEPA Section 401 Water Quality Certification Application Date: OCT. 2008 Exhibit: 94
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PROFILE



CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1"-20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1"-40'



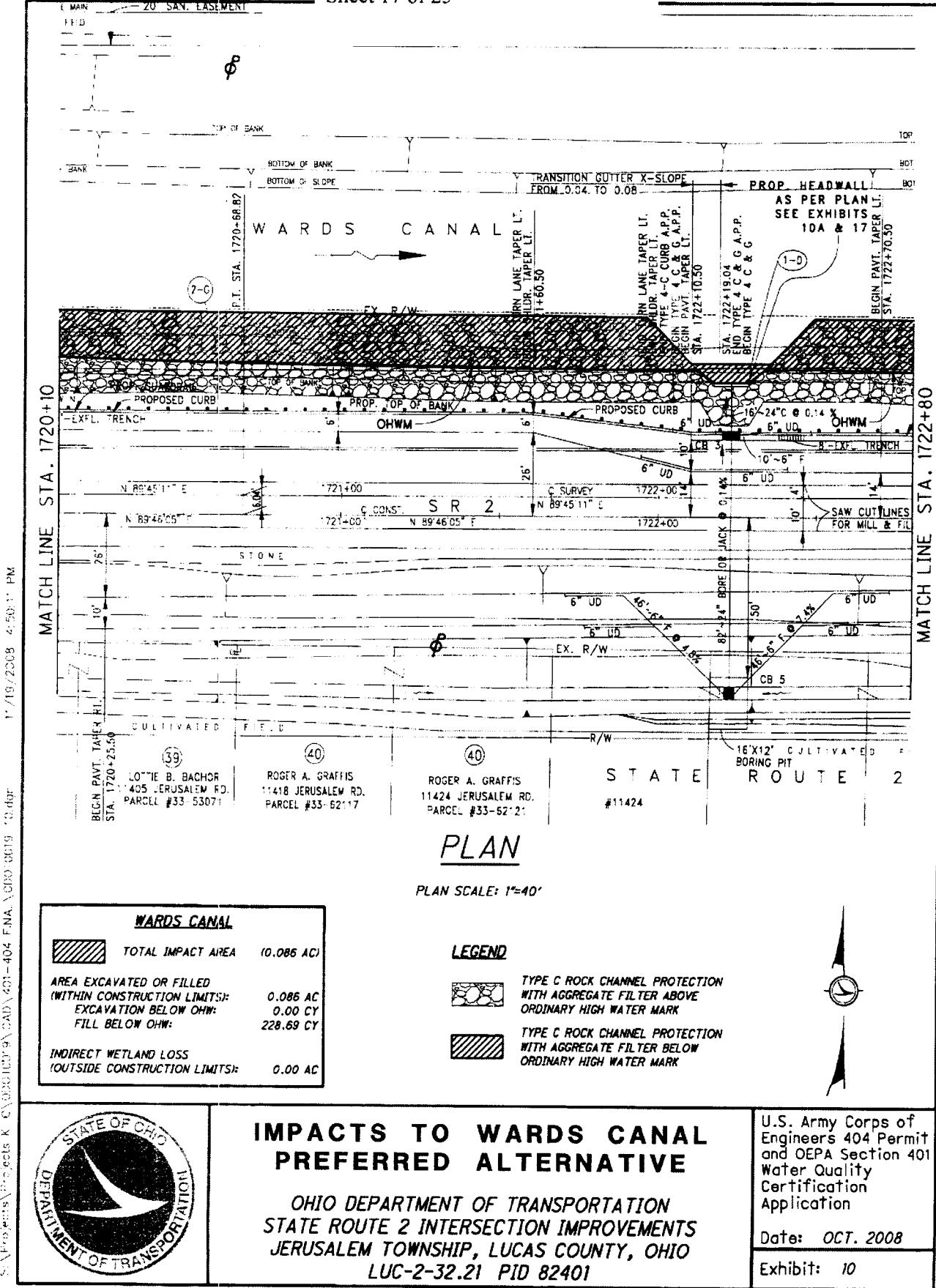
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

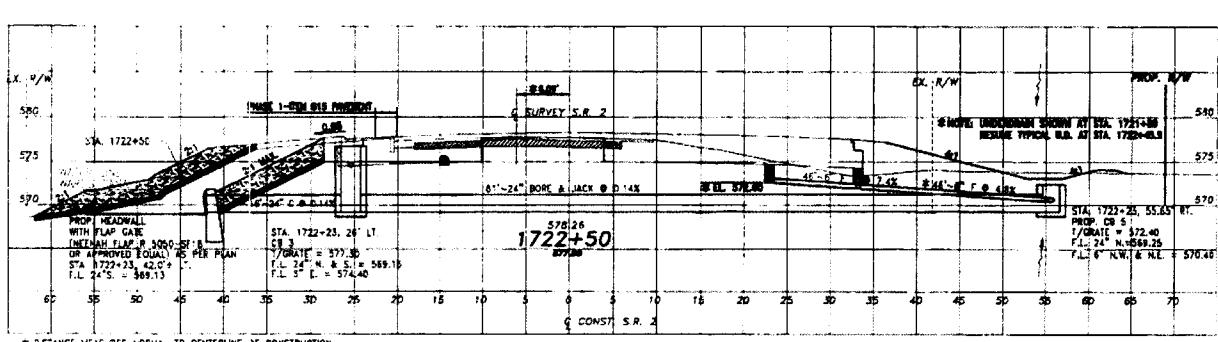
OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
LUC-2-32.21 PID 82401

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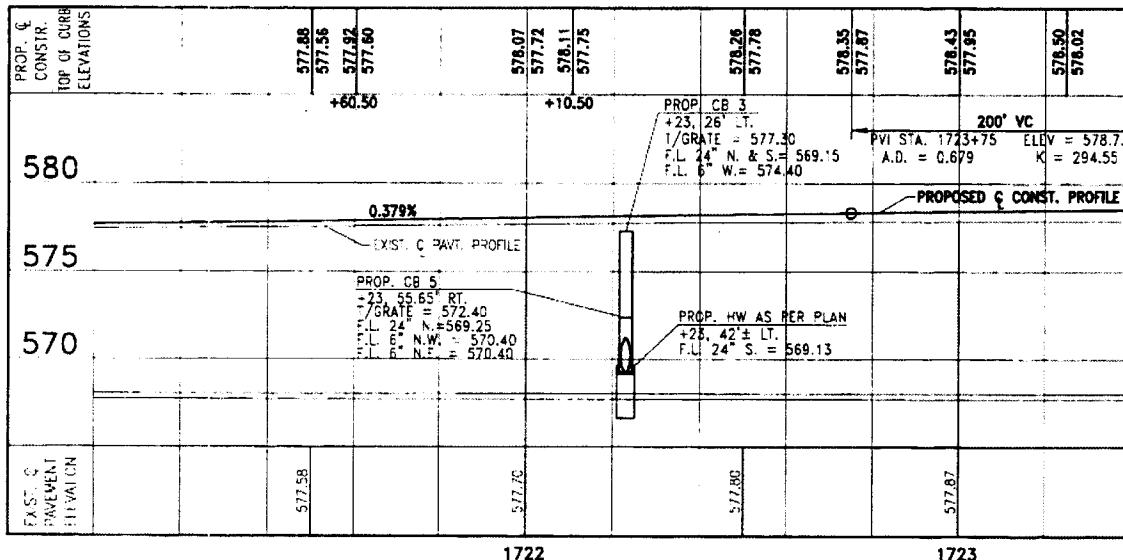
Date: OCT. 2008

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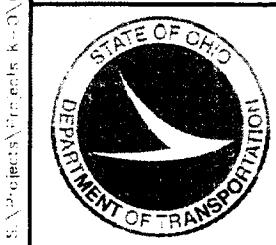


PROFILE



CROSS SECTION

APPROXIMATE PROFILE HORIZONTAL SCALE: 1'=20'
APPROXIMATE CROSS SECTION HORIZONTAL SCALE: 1'=40'



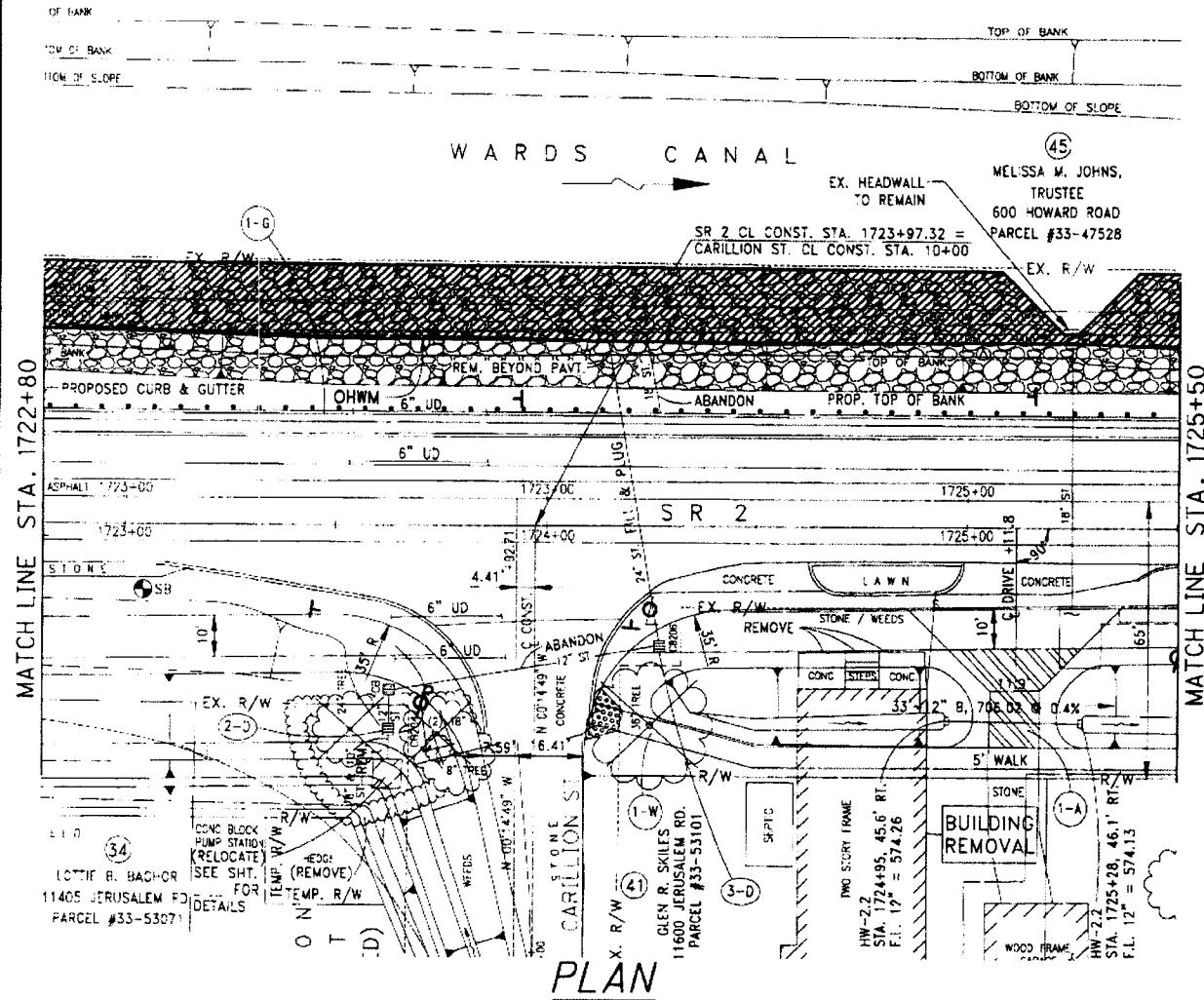
IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
STATE ROUTE 2 INTERSECTION IMPROVEMENTS
JERUSALEM TOWNSHIP, LUCAS COUNTY, OHIO
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PLAN SCALE $F: 1''=40'$

<u>WARDS CANAL</u>	
	TOTAL IMPACT AREA
	(0.10 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.10 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	228.58 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC



**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER ABOVE
ORDINARY HIGH WATER MARK**

**TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER BELOW
ORDINARY HIGH WATER MARK**



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

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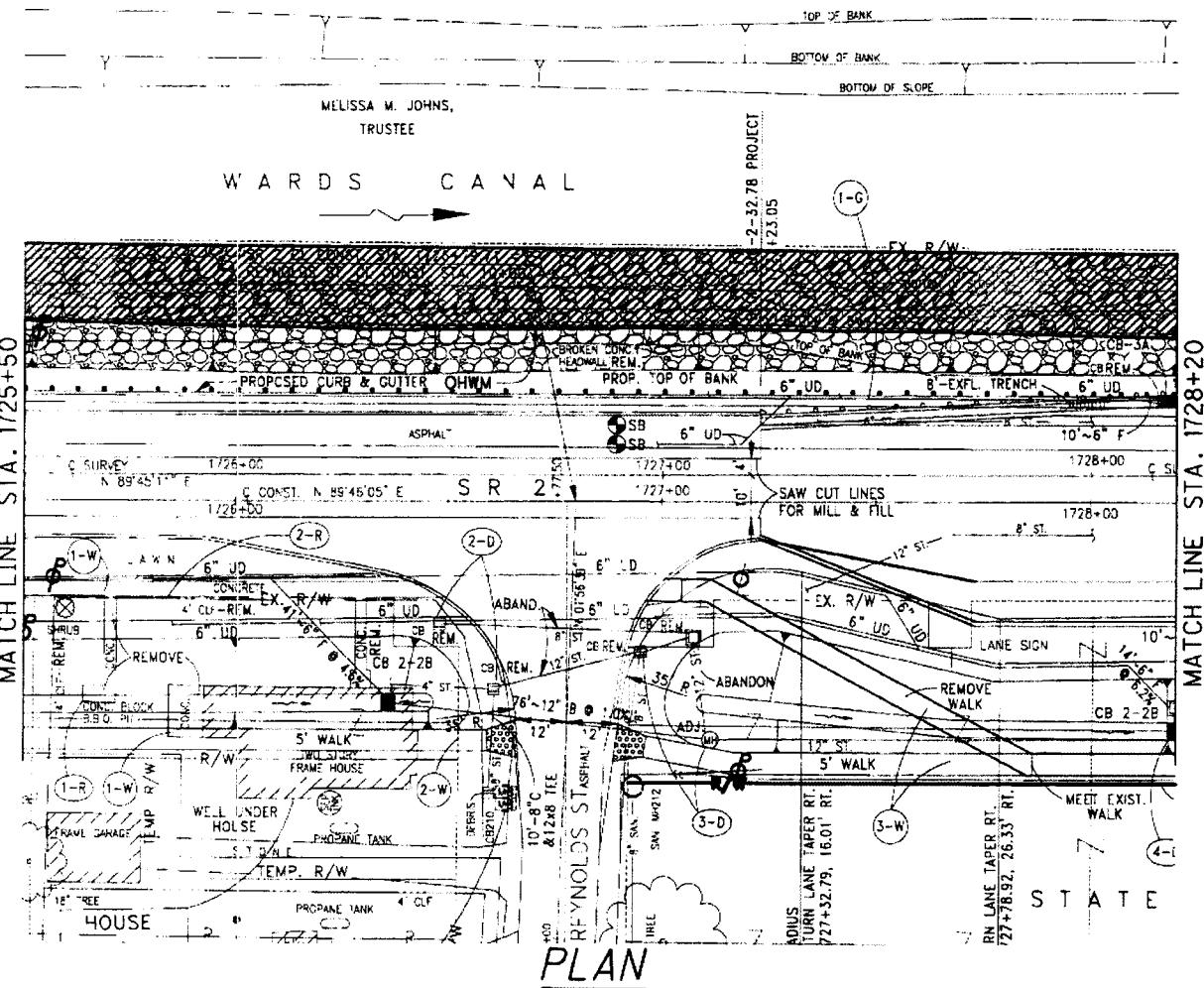
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Exhibit: II

MATCH LINE STA. 1725+50

5/4/2008 3:02 AM



WARDS CANAL	
	TOTAL IMPACT AREA (0.113 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS): EXCAVATION BELOW OHW: FILL BELOW OHW:	0.113 AC 0.00 CY 269.78 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER ABOVE ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER BELOW ORDINARY HIGH WATER MARK



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

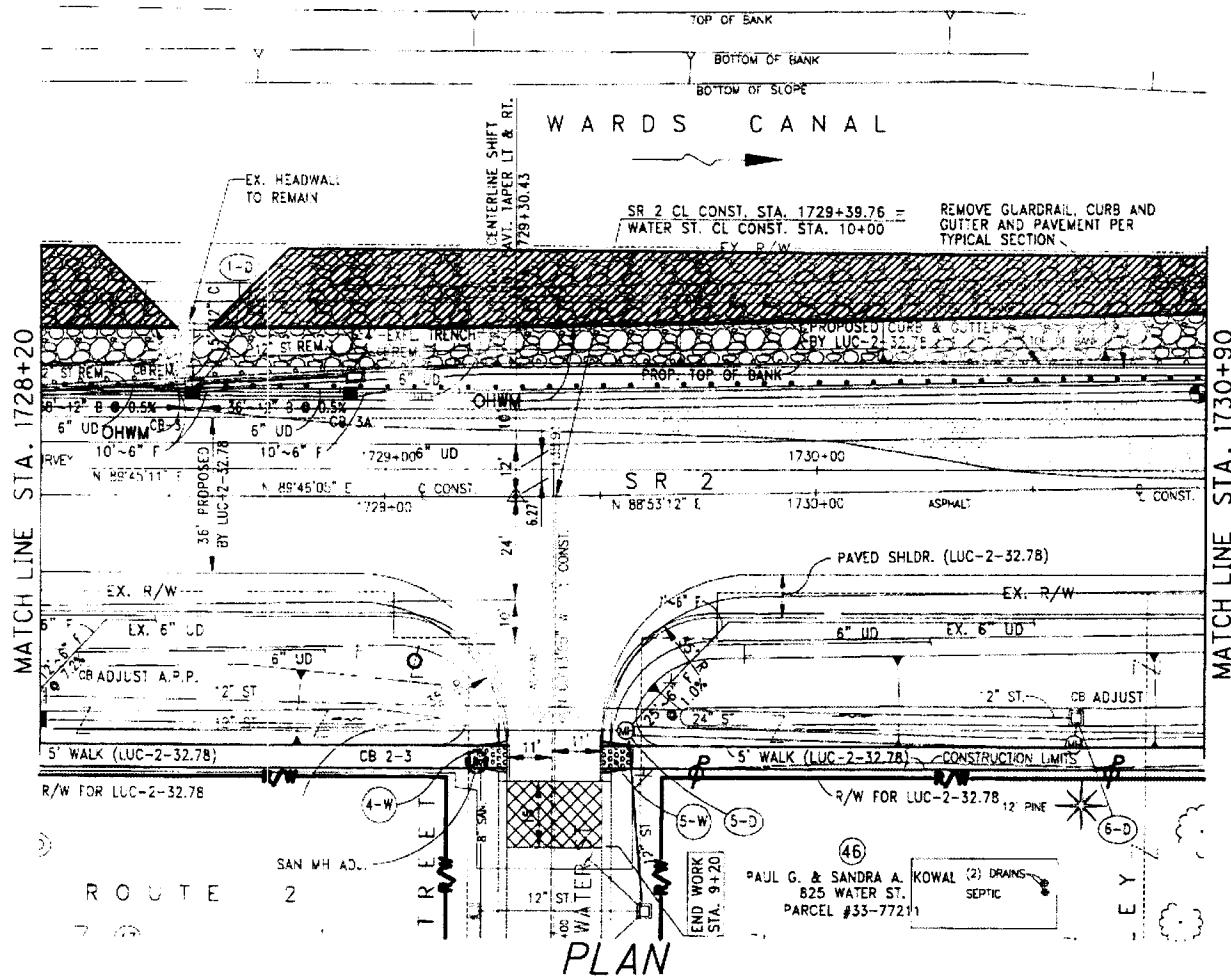
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STATE ROUTE 2



WARDS CANAL	
	TOTAL IMPACT AREA (0.092 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS): EXCAVATION BELOW OHW: FILL BELOW OHW:	0.092 AC 0.00 CY 245.77 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

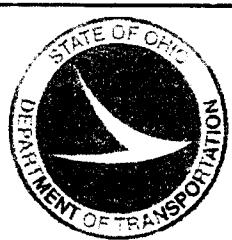
LEGEND



TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER ABOVE
ORDINARY HIGH WATER MARK



TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER BELOW
ORDINARY HIGH WATER MARK



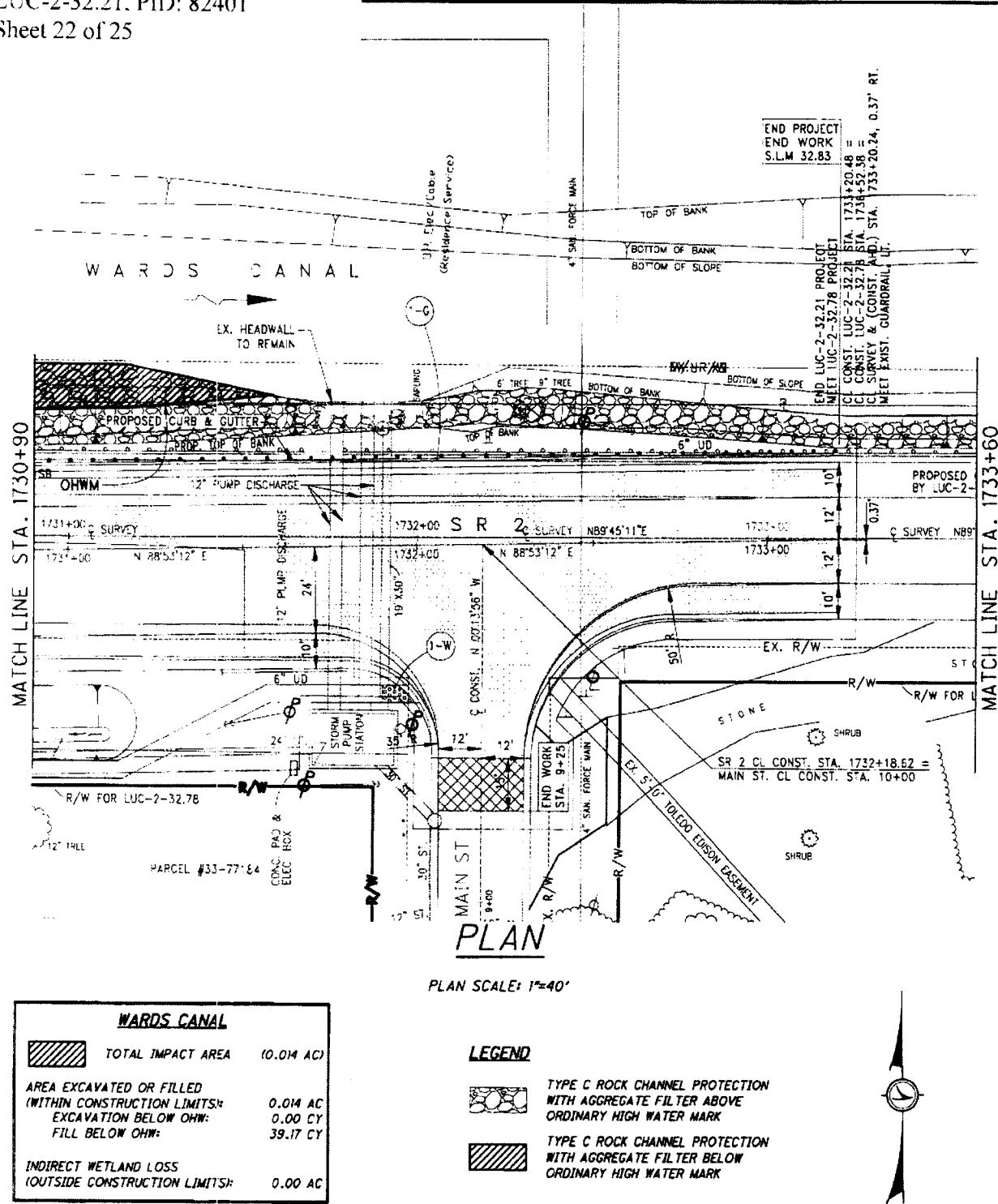
IMPACTS TO WARDS CANAL
PREFERRED ALTERNATIVE

OHIO DEPARTMENT OF TRANSPORTATION
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IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

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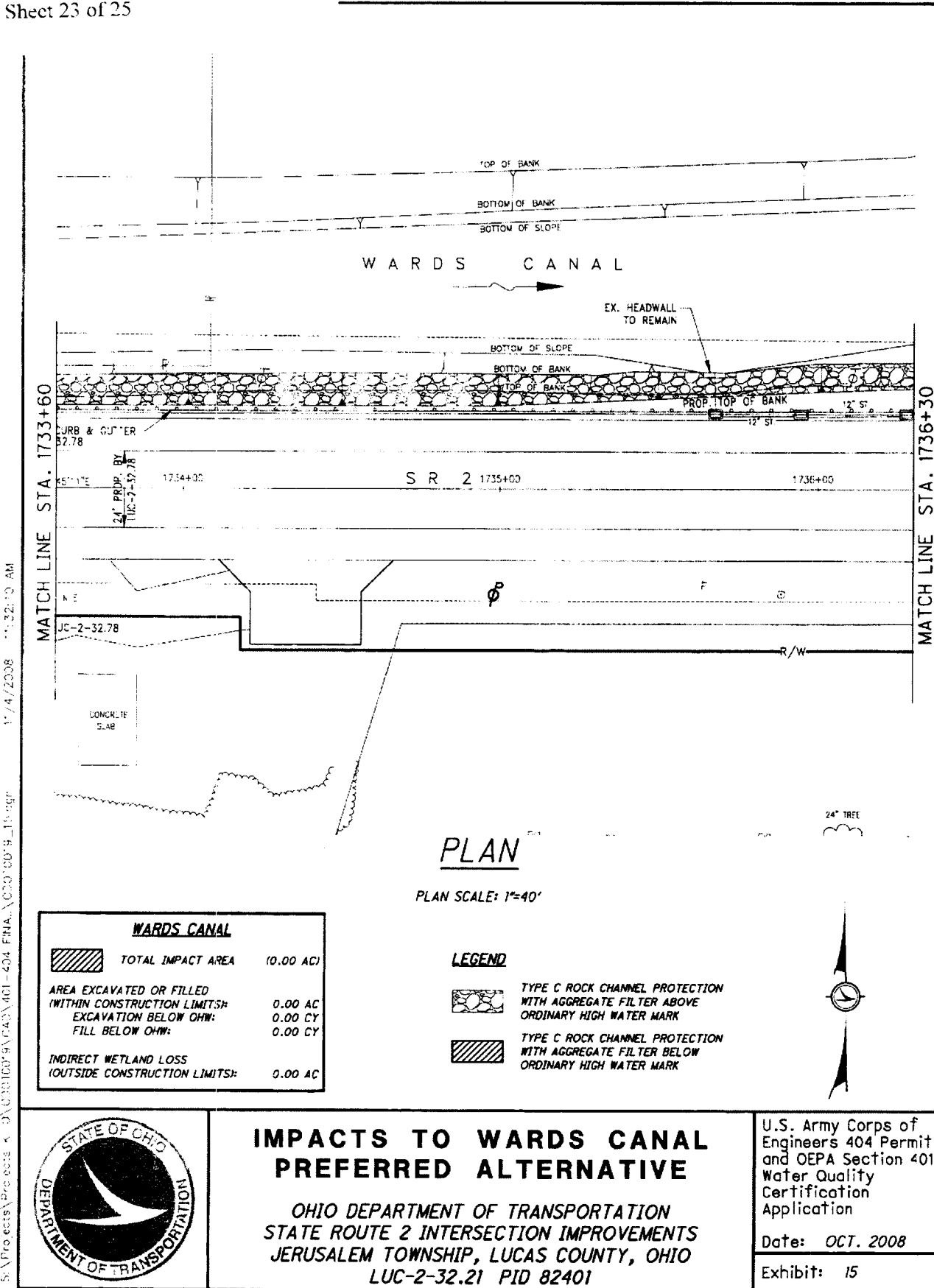
Date: OCT. 2008

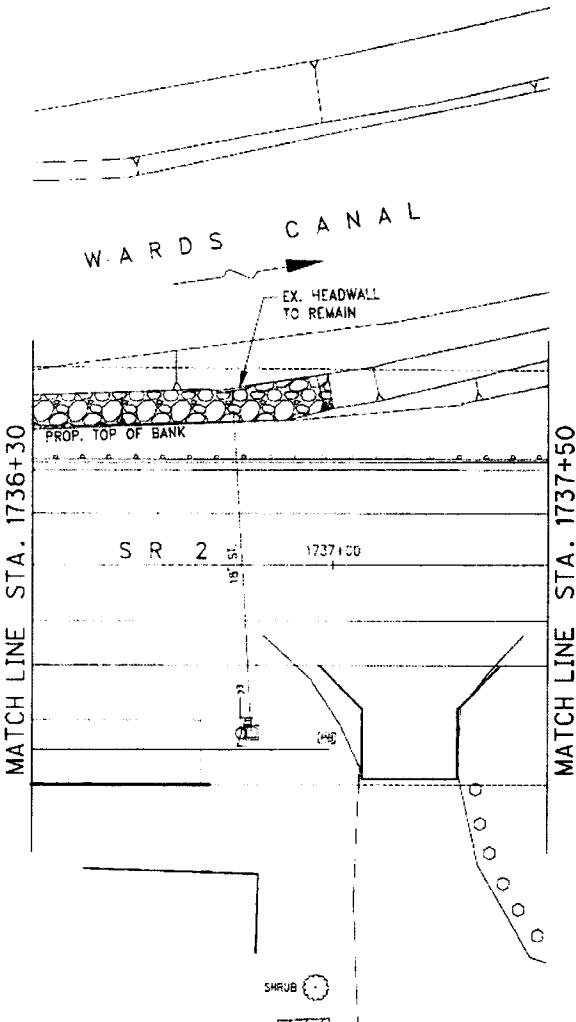
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PLAN SCALE: 1"=40'

WARD'S CANAL	
	TOTAL IMPACT AREA (0.00 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	0.00 AC
EXCAVATION BELOW OHW:	0.00 CY
FILL BELOW OHW:	0.00 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.00 AC

LEGEND

- TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER ABOVE
ORDINARY HIGH WATER MARK
- TYPE C ROCK CHANNEL PROTECTION
WITH AGGREGATE FILTER BELOW
ORDINARY HIGH WATER MARK



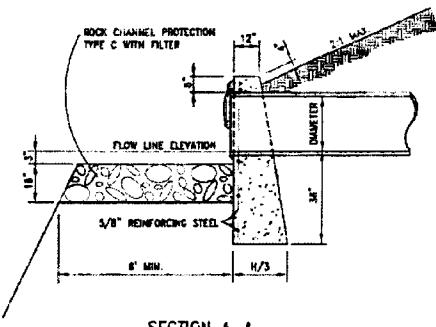
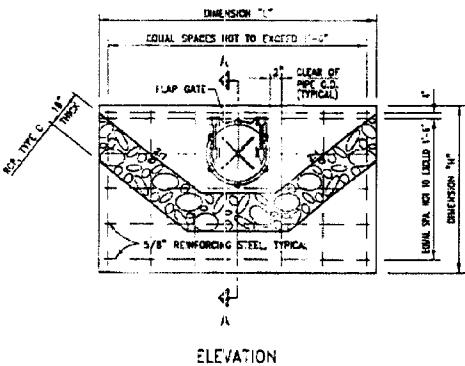
**IMPACTS TO WARD'S CANAL
PREFERRED ALTERNATIVE**

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ELEVATION

SECTION A-A

DIMENSIONS		QUANTITIES	
		ONE HEAD	STEEL LBS.
JAMB:	H	L	CONCRETE CUB. YDS.
5'	5'-2"	7'-0"	1.7
5'	5'-5"	6'-4"	2.2
5'	5'-8"	5'-8"	2.8
5'	5'-11 1/2"	5'-3"	3.5
5'	6'-2"	4'-4"	5.5
5'	6'-5"	3'-8"	4.7
5'	6'-8"	2'-4"	5.1

NOTES:

CONCRETE SHALL BE CLASS "C"

REINFORCING BARS SHALL MEET DOT SPEC. 501, EPOXY COATED

CHAMFER ALL EXPOSED CORNERS 3/8"

FOUNDATION - WHERE THE SOIL BORINGS INDICATE A BEARING CAPACITY OF LESS THAN 2600 POUND PER SQUARE FOOT, IT WILL BE NECESSARY TO INCREASE THE WIDTH OF THE BASE.

**ITEM 602
CONCRETE MASONRY, AS PER PLAN**

THIS ITEM OF WORK SHALL CONSIST OF ALL THE WORK INCLUDED IN ITEM 602 CONCRETE MASONRY ALONG WITH THE INSTALLATION OF STORM SEWER FLAP VALVES ON A FULL HEIGHT HEADWALL AS SHOWN ON THIS SHEET, AND NECESSARY COFFERDAMS, CRISPS AND SHEETING TO MAINTAIN A DRY EXCAVATION DURING PLACEMENT OF HEADWALL AND CONNECTING CONDUIT.

THE STORM SEWER FLAP VALVES WITH BRONZE SEAT FACES SHALL BE OF THE FOLLOWING OR AN APPROVED EQUAL:

1. NEERIAN R-555C, TYPE SF AS MANUFACTURED BY NEERIAN FOUNDRY OF NEWTON WISCONSIN.
 2. WATTEMAN PF-25 AS MANUFACTURED BY WATTEMAN INDUSTRIES OF CEDAR, CALIFORNIA.
 3. RODNEY HUNT FY-25 AS MANUFACTURED BY RODNEY HUNT INDUSTRIES OF ORANGE, MASSACHUSETTS.

THE FLAP VALVES SHALL BE SECURED, FASTENED TO THE CONCRETE MASONRY WALL USING BRONZE OR STAINLESS STEEL EXPANSION BOLTS AND ANCHORS.

HEADWALL, AS PER PLAN

NOT TO SCALE



IMPACTS TO WARDS CANAL PREFERRED ALTERNATIVE

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